

Mail, DNS

The Bioinformatics Lab 2013
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Overview

- DNS Server
- Mail server
- IMAP server
- Procmail

Prerequisites

- Graphical desktop
- Iceweasel

DNS Server

zone definition (/etc/bind/named.conf.local)

```
zone "tbl" {  
    type master;  
    file "/etc/bind/db.tbl";  
};  
  
zone "16.168.192.in-addr.arpa" {  
    type master;  
    file "/etc/bind/db.192.168.16";  
};
```

DNS Server

tbl zone: /etc/bind/db.tbl

```
$TTL      86400
@          IN      SOA      <uid>.tbl. root.<uid>.tbl. (
                                12051501      ; Serial
                                604800         ; Refresh
                                86400          ; Retry
                                2419200        ; Expire
                                86400 )        ; Negative Cache TTL
;
@          IN      NS       <uid>.tbl.

lkajan     A       192.168.16.2
alex       A       192.168.16.3
...
```

DNS Server

reverse data file: /etc/bind/db.192.168.16

```
$TTL      86400
@         IN      SOA      <uid>.tbl. root.<uid>.tbl. (
                                12051201      ; Serial
                                604800         ; Refresh
                                86400          ; Retry
                                2419200        ; Expire
                                86400 )        ; Negative Cache TTL
;
@         IN      NS       <uid>.tbl.

2         PTR      lkajan.tbl.
3         PTR      alex.tbl.
...
```

DNS Server

test: named-checkconf

```
zone tbl/IN: loaded serial 12051501
zone 16.168.192.in-addr.arpa/IN: loaded serial 12051201
zone localhost/IN: loaded serial 2
zone 127.in-addr.arpa/IN: loaded serial 1
zone 0.in-addr.arpa/IN: loaded serial 1
zone 255.in-addr.arpa/IN: loaded serial 1
```

update /etc/resolv.conf

```
domain tbl
search tbl
nameserver 127.0.0.1
```

DNS Server

test server:

```
niko@niko:~$ host niko.tbl
```

```
niko.tbl has address 192.168.16.10
```

```
niko@niko:~$ ping niko.tbl
```

```
PING niko.tbl (192.168.16.10) 56(84) bytes of data.
```

```
64 bytes from niko.tbl (192.168.16.10): icmp_req=1 ttl=64 time=0.048 ms...
```

```
niko@niko:~$ dig niko.tbl
```

```
; <<>> DiG 9.8.4-rpz2+rl005.12-P1 <<>> niko.tbl
```

```
;; global options: +cmd
```

```
;; Got answer:
```

```
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 14435
```

```
...
```


DNS Server - side note

`www.google.com` has address `173.194.69.104`

`www.google.com` has address `173.194.69.105`

`www.google.com` has address `173.194.69.106`

`www.google.com` has address `173.194.69.147`

`www.google.com` has address `173.194.69.99`

`www.google.com` has address `173.194.69.103`

`www.google.com` has IPv6 address `2a00:1450:4008:c01::93`

`www.wikipedia.com` is an alias for `wikipedia-lb.wikimedia.org`.

`wikipedia-lb.wikimedia.org` is an alias for `wikipedia-lb.esams.wikimedia.org`.

`wikipedia-lb.esams.wikimedia.org` has address `91.198.174.225`

`wikipedia-lb.esams.wikimedia.org` has IPv6 address `2620:0:862:ed1a::1`

Mail Server Controversy

configure postfix:

```
dpkg-reconfigure postfix
# Internet site
# System mail name: <uid>.tbl
# root/postmaster: <uid>
# destinations to accept mail: <uid>.tbl, localhost, localhost.
tbl
# force synchronous updates
# local networks: 192.168.16.xx
# use procmail for local delivery: yes
# rest: default (perhaps only use IPv4)
```

Server Dilemma

configure maildir:

```
# tutorial Maildir:  
DEFAULT="$HOME/Maildir/"
```

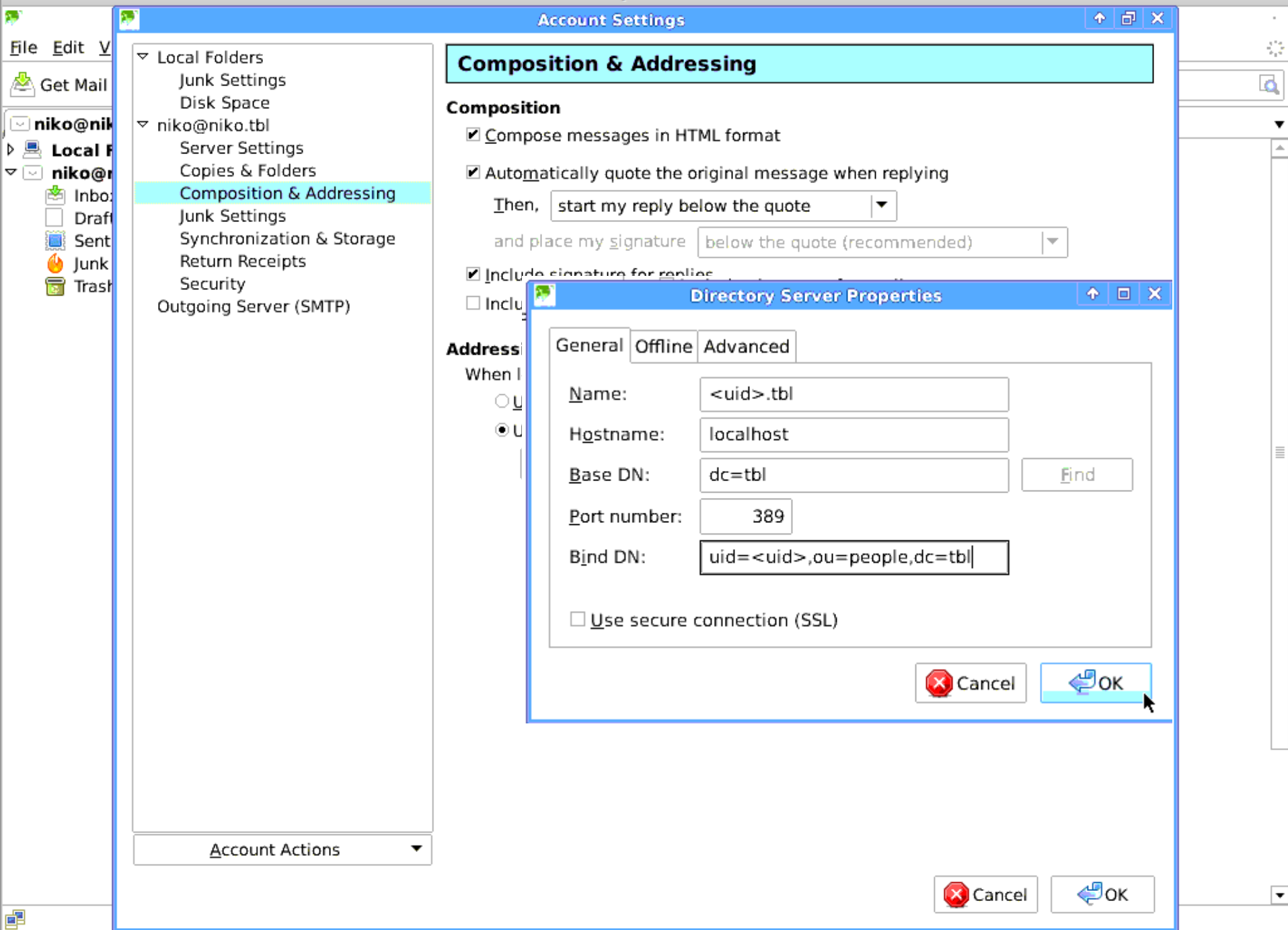
```
# my Maildir (awesome):  
MAILDIR="$HOME/mail/"
```

Mail Confusion

"Send a mail to yourself as root"

<?live demonstration?>

<?Questions?>



Advanced Challenge

procmail recipes:

```
:0 Ec
* ^Subject: .*work.*
* ^Subject: .*exam.*
* ^!X-Loop: niko@niko.tbl
| ( formail -rt -A "X-Loop: niko@niko.tbl"; \
    echo "Alas! I am mortally ill!"; \
    ) | $SENDMAIL -t
```

~likewise for work, exam, only without E

Advanced Challenge - SpamAssassin

```
sudo apt-get install spamassassin
```

```
~/ .procmailrc:
```

```
:0fw: spamassassin.lock
```

```
* < 256000
```

```
| spamassassin
```

```
:0:
```

```
* ^X-Spam-Level: \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*
```

```
almost-certainly-spam
```

```
:0:
```

```
* ^X-Spam-Level: yes
```

```
probably-spam
```

Advanced Challenge - SpamAssassin

```
:0
* ^^rom[ ]
{
    LOG="Fixing F drop..."
    :0
    | sed -e '1s/^/F/'
}
```

<no real test>

Sources

- wiki
- wikipedia.org
- Last year tutorial (Yannick)
- FreeBSD manpages (procmailrc)
- nice Procmail tutorial (TM)
- Internet in general
- manpages